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Care of Pullets for Winter Eggs

By E. L. DAKAN
Department of Animal Husbandry

It is common knowledge among poultrymen and farmers that pullets lay the winter eggs. The poultryman who manages his flock properly should have his pullets coming into production at the time the hens cease production. During the fall and winter months, when the majority of hens stop laying, the demand for fresh eggs exceeds the supply, and prices always rise. The poultryman who keeps his production high during September, October, November, and December sells his eggs on a good market, and records kept by demonstration farms prove that such poultrymen make greater profits than the one who produces eggs only in the spring when eggs are selling at their lowest price.

BREEDING AND SELECTION

Poultrymen have been advised to hatch their chicks early in order that they have time to mature for fall and winter production. This advice is sound enough, but it means that such breeds as Rocks, Reds, and Wyandottes must be hatched during cold weather when it is almost impossible to keep the eggs at the right temperature either before setting or after they have been placed in an incubator. The fertility is always low during the early months, and the eggs set are valuable at market price. Consequently it costs more to produce a chick and more to brood it at this unfavorable season. Farmers who use hens for incubation find it almost impossible to follow the "hatch early" advice.

A much better method is to breed for a rapid-growing, early-maturing strain that will develop in from five to seven months. This can be done by selecting cock birds that mature early and pullets that mature and begin laying at from five to seven months of age. If this is done the incubation and brooding can be done during the natural season and the cost of production can be materially decreased.

RANGE

Pullets should remain on free range, where there is plenty of green food and bugs, until they are fully mature and have stored up a surplus supply of body fat. There should be plenty of shade on the range; this can be provided by trees, bushes, corn, and weeds.

The cockerels should be removed from the pullets' range at the broiler age to prevent them from chasing and treading the pullets.

The Ohio State University, Cooperating with the United States Department of Agriculture, Agricultural College Extension Service, H. C. Ramsower, Director, Columbus, Ohio.
FREE—Cooperative Agricultural Extension Work—Acts of May 8 and June 30, 1914.

FEED AND MANAGEMENT ON RANGE

It is essential that growing chickens be supplied with the necessary food elements for rapid growth. This can be done by keeping before them in a self-feeder, at all times a dry mash which contains from 5 to 10 percent of meat scraps or tankage. If tankage is used, ground bone or bonemeal should be kept in another self feeder or mixed with the mash at the rate of 5 pounds to each 100 pounds of the mash. A satisfactory mash may be mixed as follows:

DRY MASH MIXTURES

No. 1	No. 3
100 pounds cornmeal.	100 pounds ground corn.
100 pounds high grade shorts.	100 pounds ground wheat.
100 pounds wheat bran.	100 pounds ground oats.
100 pounds ground oats.	100 pounds wheat bran.
50 pounds meat scraps or tankage.	50 pounds meat scraps or tankage.
No. 2	**No. 4**
200 pounds shorts.	Any of the above mixtures without the meat scraps but with all the sour milk the chicks can drink. Nothing but milk should be given to drink if no meat scraps or tankage are fed.
200 pounds bran.	
50 pounds meat scraps or tankage.	

It is sometimes advisable to force the growth of late-hatched, slow-growing pullets by forcing the food consumption. This can be done by mixing any of the above mashes with sour milk or water, until it is just crumbly, and feeding in the middle of the day. Care should be taken not to overfeed of this wet mash. Only a small amount should be fed at first and the quantity increased gradually. They should never be fed more of the wet mash than they will eat at one time.

Scratch grain, consisting of whole wheat or of cracked corn or a mixture of the two, may be fed to the pullets to advantage morning and evening, on the clean ground, or in a few inches of clean, dry litter in the house. The morning feed should be very light or entirely eliminated and the evening feed just what the pullets will clean up, never more than that. It should be remembered that the scratch grain is ordinarily a supplementary feeding and should not be depended upon alone to produce mature pullets.

Animal food such as meat scraps, tankage, and sour milk are necessary for proper growth. Bugs and worms are provided by nature for this animal food. The supply from this source, however, is not sufficient to feed a flock of several hundred chickens. The pullets should have access at all times to clean, fresh water, except when milk is substituted.

Poultrymen who have mature pullets in July or August should delay egg production until October or November in order to prevent the winter molt, which almost invariably occurs when the pullets begin laying too early. One method of delaying the egg production is to remove the animal food from the mash and give only water to drink, or the mash may be removed and only scratch feed given. The scratch feed will fatten the pullets and they will consequently be in good condition when they are put in the laying house and animal food is again fed for egg production. Pullets will make a good winter record if a surplus supply of fat is stored. The animal food, however, should not be removed until the pullets are fully matured and not then except as a means of delaying egg production and to fatten the pullet.

HOUSING

The poultry house is the home of the pullets, and too much attention cannot be paid to this home and its requirements, which are:

1.—Plenty of fresh air but free from drafts. Muslin curtains should be used only to keep out snow and rain.
2.—An abundance of sunshine thru windows on the south, east, and west.
3.—At least three square feet of floor space per bird.
4.—A deep, dry litter of straw for the birds to exercise in.
5.—A nest for every four pullets and plenty of roosting space.
6.—Dry mash hoppers or boxes in sufficient numbers to allow at least one-half the pullets to eat at once.

This last requirement is too often overlooked. Egg production is largely the result of food consumption. Actual room for eating is often not provided and where this eating space is limited the egg production will be reduced. This factor is no doubt one reason why small flocks lay more eggs than large flocks.

FEEDING FOR EGG PRODUCTION

Animal food is necessary for winter egg production. This is supplied by feeding a dry mash containing 20 percent of meat scraps or tankage, or by giving the birds nothing to drink but sour milk. The meat scraps or tankage can be reduced in case some milk is fed, and can be entirely left out of the mash if plenty of milk is given. Semi-solid buttermilk mixed in the proportion of one part of the condensed milk to five or six parts of water will supply animal food, and the egg production will be higher than with meat scraps or tankage. No water should be given if milk alone is the source of animal food.

RATION

	Scratch	*Mash*
No. 1.	200 pounds corn. 50 pounds oats.	200 pounds shorts. 200 pounds bran. 100 pounds meat scraps
No. 2.	200 pounds corn. 100 pounds wheat.	100 pounds cornmeal. 100 pounds bran. 100 pounds shorts. 100 pounds ground oats. 100 pounds meat scraps or tankage.
No. 3.	100 pounds corn. 100 pounds wheat. 100 pounds oats.	100 pounds ground corn. 100 pounds wheat. 100 pounds oats. 100 pounds meat scraps or tankage.

No. 4.—Any of the above scratch feeds and mashes without the meat scraps or tankage, giving nothing but milk to drink, or giving part milk and reducing the amount of meat scraps or tankage.

If the egg production is maintained as high as 30 percent there should be about an equal amount of mash and grain consumed.

Oyster shell and grit should be kept before the pullets in self feeding boxes. It should be borne in mind that grit is the hens' teeth and should be

hard and insoluble, while oyster shell is to manufacture egg shell and is fed because it is soluble. Each serve a definite purpose and should be supplied at all times.

Green food such as cabbage, beets, or vegetable peelings are beneficial in securing good winter production. They aid in the digestion of the grain, and increase the amount of water taken into the hen's body.

Stimulants are not necessary for egg production and farmers are wasting money by buying such products. The directions always prescribe milk or meat scraps, and any increase in production is due to these and not to the medicine.

FORCING FOOD CONSUMPTION

The difference between spring and summer egg production and winter production is largely the result of a difference in the food consumption. The winter days are so short that a pullet cannot consume enough food to maintain her body and at the same time make an egg.

The food consumption can be increased in the winter months by feeding the birds a wet mash in the morning. Any of the mashes given on page 3, mixed with water or milk until just crumbly may be fed.

The use of electric lights to lengthen the day is another means of increasing food consumption by giving the birds a longer eating period. The lights may be used either in the morning or evening or both morning and evening. The tendency is to use the lights to excess. A 14-hour day should be the standard.

At the present prices of eggs 500 mature pullets will pay for a lighting plant, in increased egg production, in a year. Specialized poultrymen in Ohio should use lights more than is now their custom.

SUMMARY

1.—Pullets should be early hatched in order to be mature for winter production. The first pullets to mature are the best and should be selected as breeders in case pullets are used for this purpose.

2.—Rapid growth and early maturity mean a lower cost of production. Pullets should mature in from five to seven months.

3.—Proper feed will increase the rate of growth. A dry mash containing meat scraps or tankage should be kept before the growing pullets. Milk is the most desirable form of animal food, and if nothing but milk is given the pullets to drink the meat scraps or tankage may be left out of the mash.

4.—Pullets should be in good condition for winter egg production. Take the mash and milk from them after they are mature and feed only grain and water. This will supply them with a surplus supply of body fat which is necessary for good egg production. The fattening period need not extend over a long period of time. The age of the pullets will determine the length of this fattening period. Pullets should not lay until October or November, and by removing the animal food, early-hatched, early-maturing pullets will not lay heavily until the proper time.

5.—A dry mash containing 20 percent meat scraps or tankage should be fed for egg production. Milk is better than either meat scraps or tankage. If milk alone is used to supply animal food no water should be given.

6.—Oyster shell, grit, and green food are essential feeds for laying pullets.

7.—Highly advertised stimulants are not a safe feed and should not be fed.